WALDO L. SCHMITT - TORTUGAS NOTES

1932

June 15 to August 8, 1932
Station Records

Longley

Boyden, Rutgers (ex Wisconsin)

Hayes, Dalhousie, Kiel, & Liverpool

Leitch, Calif, Armstrong Jr. College, Berkeley (private pay, commercial enterprise)

R.G. Stone, now of Pennsylvania

H. W. Manter, Nebraska

O. L. Williams, U. Calif. 1933 College of Pacific, Stockton

Yamagouchi, Chicago

Warren Lewis, Johns Hopkins

J. W. Wells, Nat. Research Council,Nat. Mus.

M. W. de Laubenfels

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June 15, 1932

Left Key West, hot sunny day, shortly after noon. Arrived Island, quiet, uneventful trip, at 7:15. Got suitcases up, then supper and to bed.

June 16, 1932.

a.m. Got unpacked and straightened out. 2:00 - 4:00 p.m.southern end Bird Key Reef.

#1 - 32.

Collecting between 2:00 and 4:00. Few shrimps taken and yellow viviparus fish, female with tails of 2 young sticking out about 1/8 to 1/4 inch. Tail just came out about 20 minutes after taking while showing to Dr. Longley on reef.

June 17, 1932.

#2-32.

Bright, clear, sunny day with cool morning, at 6:00--28° C. Dredging in 4 fms.+

Left dock about 7:30 - 7:45. Ran S.E. from No. 2 Red buoy, greater part of way.

Sound	9:10	20 fms.	
	9:30	36 fms.	Net empty
	9:38	40 fms.	
Net over	9:45		
On bottom	9:55		85 - 100 fms. cable out
Haul in	10:15		
On deck	10:25		
Sound	10:27	40 fms.	

June 17, 1932 - Continued

#3 - 32. 40-45 fms.

Sound	10:27	40 fms.
Net over	10:32	
On bottom	10:40	127 fms.
Haul in	11:00	
On deck	11:27	
Sound	11:30	45 fms.

3 large Stenociop 2♂ 1♀. Largest, a male, had amphi all over, but not other 2.

2 hermits, Dardanus.

Half dozen slender spiders.

55 Portunus spinicarpus

1 Salpa maxima

Purple gorgonian, some bryozoa

2 sponges to de Laubenfels out of #4?

Frags. of coral rock (largely foraminifera)

1 pc. coral given to Wells.

Couple of Stenorhynchus in one of these hauls = #3-32

June 17, 1932. - Continued

#4 - 32.

Sound	11:30	45 fms.	
Net over	11:35		
On bottom	11:45		150-170 fms. cable out
Haul in	12:20		
On deck	1:00		
Sound	1:05	46 fms.	Fine, compact grey oozy mud

Homeward N X W.

2 species Plax crabs, few P. spinicarpus; few, 2 or 3, hermits.

1 large suborbicular spider, 1 smaller same? soft & shell. ~~One and same spine~~.

1 Munida transverse purple banded, and chela only of another spec. of ~~xxxxxxxx~~ same species.

Shells and ophiurans of 2 hauls combined, saved.

June 18, 1932, Saturday

#5 - 32.

Collected between 2:00 and 4:30. Went to northernmost point Long-Bush Key. On inside is still the fiddler flat, very circumscribed patch. On outside of reef weedy rocks got Stenopus some Synalpheids,and no end of Petrolisthes galathinus to be found here. The place for catching them. Here also got Actea setiger, Crangon formosus, little red Pisosomas. In tide pools between sea and fiddler flat got a chocolate colored Cangon and few Leptodius floridanus (Dexter got Leptodius). Except galathinus cracked from rocks taken on (outer) edge of reef just to west of most northerly point of Reef where I should say almost that Bush and Long Keys join. Several crabs that Dexter got ~~xxx~~ are from Bird Key Reef.

June 19, 1932.

#6 - 32.

Went over on reefs from 2:00 - 6:30 p.m. First over Bush Key as far as fiddler ground. Took two to make a panorama at 5 11 1/25 sun under cloud and one at F 8 1/25 to check. Also tried one of birds at same with a at F 11 1/25. Two general views at F 11 1/50?

Collected on Bird Key reef, northern section between main channel to north and one to south of it. A patch of colonial anemones has come in, and sure enough got three little Platypodias from under the patches on rocks. Seemed to be no end of Crangon armillatus about. Only saw one of all greenish ?xx ?heterochaelis type. Under larger, apparently more loosely piled rocks with larger interstices, which rush of water kept open, no end of large Mithrax verrucosus, which is place to get them. On under side of a rock two little Stenopuses, near outer edge.

June 20, 1932, Monday. Between 6:30 & 7:30 p.m., low tide.

After night of rain. Collected over rocks south of lighthouse dock west side of (Loggerhead) island. Wells got a nice xxxx large ♀ Platypodia spectabilis, found on flat plate-like colonial xxxxx actinian. Light greenish cream ground, cadmium yellow marking. (Returned this to him.)

Got great many greenish and quite translucent palish, whitish, sickly washed out greenish Alpheus. Stone got one of largest of greenish Alpheus I've seen so far (looks like C. verrilli--he gave it to me). After night in formalin hands are brownish, were greenish, and show numerous round white spots or ocellations. There were almost a couple of alpheids under every sizable rock. Only saw one tiny cross barred one armillatus type; all rest greenish.

Stone also got an Automate separately color noted.

There were a great many Microphrys bicornutus.

June 21, 1932, Tuesday.

Worked in lab most of yesterday and today. Rain off and on up until about 1:00 p.m., quite clear and sunny all afternoon.

#8 - 32.

Went down on west side Loggerhead Key rocks, low tide after supper.

~~June 22, 1932, Wednesday.~~

June 22, 1932, Wednesday.

Rain again last night. Lab work in a.m.

Three hauls in channel to westward of White Shoal.

Net over 12:50 Start up 1:15

#9 - 32 First haul on course N.E. to opposite Buoy.

Net over 1:25 Start up approx. 2:00 p.m.

#10 - 32 Second near toward shoal in line with buoy
repeat

Net over 2:30 p.m. Start up 2:45 p.m.

#11 - 32 Third close to edge of shoal
repeat

All clean hauls, very few algae, all crustaceans out of 10-32 except one amphipod out of 9-32. Got several Dromids, one quite red, in red sponge. Got several Podochelas and one very striking urchin.

June 23, 1932, Thursday

Somewhat cloudy and good and windy. This a.m. went trawling right after breakfast. Four hauls in channel between N. end Loggerhead and Red Buoy N. end White Shoal. Left dock 7:40.

#12 - 32 8-10 fms. in channel N.E. Loggerhead Key. Mud and algal muck, nearest shoal

Net over at N. end, tow southeast ±

Net over 8:05 Start up 8:25

#13 - 32, Sponge haul, ~~xx~~ little farther out.

Net over 8:44 Start up 9:10

#14 - 32 Center channel haul

Net over 9:25 Start up 9:50

#15 - 32 Center channel haul. Many algae, bucket of ascidians.

Net over 10:15 Start up 10:35

Hauls combined for preserving.

June 24, 1932, Friday.

Clear, sunny, and fairly quiet water. Lab in a.m. Also fixed fish tank.

#16 - 32

Afternoon with Dexter, went seining, and also ~~xxxx~~ tried to dig for acanthochirus. Shovel broke, but even before it did I had no luck. In seine tried inside of Bush Key Reef, but got nothing. Tried in bight on inside (opposite channel) and got lots of small crabs and Peneids; seem to be associated. Suggest to Gutsell where one is the other might be found also!

June 25, 1932, Saturday.

Three fair hauls with net after one empty haul and loss of net on next attempt. We had no intimation that net and cork line had parted company until it was noticed that cable did not seem to have right slope. No jar, or trouble, whatsoever. Left dock 7:40.

#17 - 32 Net over 9:25, up 9:45

#18 - 32 Net over 10:15, up 10:35.

Both more or less weedy and much same fish as on previous hauls in this west (of White Shoal) channel. #18, however, yielded second "angler" fish (Pterphryne relative), proved also to be as much a puffer as a porcupine fish.

#19 - 32

In channel east of White Shoal from Red to near Black buoy. Only 4 or 5 fish taken, ~~2xxx~~ 2-3 file fish, small, 1 red sculpin, 1 seahorse.

#9 - 32.

Large yellow Macrocoeloma trispinosum put in sugar solution with a small dun (light chocolate to tan colored) tiny squilla also ~~xx~~ put in sugar. Two hermits with bright blue eyes and bright red-brown eyestalks, of which one in sugar, and one dead Calappa shell are about all crustaceans gotten in #19-32.

June 25, 1932 - CONTINUED

Last named broke as I was cleaning off some growth like black ascidian, so must be quite old.

In 17 & 18 combined got number of small crabs and 3 Crangon formosus and green squilla from cup sponge de Laubenfels dried (1 in sugar, 1 to Stone, 1 in alcohol). Several hermits, 3 Parthenope

One of the dromids (a small red = ovig. ♀) lost (sic!) his sponge and took on his back a large round bryozoan, cap-shaped. Got a Podochela, too. Parthenope serrata (M. Edw.) when in alcohol snaps chelae together in rather dangerous fashion, which suggests a mode of attack or ~~f~~x defense against some other offensive creature or crab. Arms are like heavy spears ~~xxjxxx~~ or javelins with the stout, sharp-pointed fingers at the business end.

This dromid was put in dish with small white ♂ of about the same size that carried a red sponge much too unwieldy for him. Wasn't long before bryozoan-carrying fellow had dispossessed the white one. Red fellow likewise could hardly walk, owing to buoyancy of sponge and when white ♂ got on outside and on top --and it looked as though he purposely did it--it overbalance and left usurper (ovig. ♀) still hanging and dangling high in air.

June 26, 1932. Sunday. Clear, quiet day, getting very calm in afternoon.

Left dock 8:10 a.m.

#20 - 32. Pass upper buoy 8:20, No. 2 buoy 8:32 (course due south).

Sound	9:45	40 fms.	
Under way	9:50		
Sound	10:05	64 fms.	
Net over	10:10		
On bottom	10:40	203 fms. cable out	
Net up and sound	11:30		Empty haul

#21 - 32

Sound	11:30	72 fms.	
Net over	11:33	on W X N course	
	12:10 p.m.	288 fms. cable.	
	12:40 p.m.	Put out 315 fms.	
Start up	1:10		
Sound	1:30	60 fms.	

Very few fish, large Stenocionops, 1/3 pail of Acanthocarpus alexandri.
Acanthocarpus alexandri: 9♂ 49♀ to Boyden.

#22 - 32 Run north toward light.

Sound	1:40	39 fms.	
Net over	1:45		
	2:20	150 fms. cable out	
	2:30	160 fms. cable out	
Start up	3:00 p.m.		
Return at	3:20	Pass #2 red buoy 4:30.	

Lots of flounders, 3 more Stenocionops, many sponges, several large rocks.
Wells has red branched alcyonarian; tell Miss Deichmann.

June 27, 1932, Monday

Overcast but quiet clear day. Water exceptionally clear, like yesterday. In lab in a.m., afternoon ditto.

June 28, 1932, Tuesday.

#23-32.

Windy, somewhat overcast. Hazy all day. In afternoon collected over rocks on lower west side Loggerhead Key. Tidepool is much larger and more rocks in it under which many "heterochaelis" type Crangons, occasional "armillatus" specimens, and no end of tiny tricolor hermits, half dozen burrowing ~~xx~~(viviparous) fish have been taken here this ~~xxx~~ year, Stone and Lewis. Not so good a place outside of rocks as last year.

June 29, 1932, Wednesday.

#24 - 32

Fairly quiet day, much like yesterday. Sky overcast more or less all morning.

Went over rock on east side Loggerhead. Got a number of things, including Thoe puella which I do not recall ever having gotten here before. One was in hollow of rock, other in my bucket, probably from the same source. Got several little shrimp and stomatopods. Water exceptionally clear.

June 30, 1932, Thursday. About 16 miles S. Quiet, calm, fairly clear, slightly hazy day.

#25 - 32 Left dock 7:30, pass red buoy 8:00, course S.

Sound	9:45	125 fms.
Net over	9:55	
On bottom	11:15	377 fms. cable out
Start up	12:00	
Up	12:40	
Sound		65 fms. end of haul

Good fish haul. Nearly a dozen (ca. 10 (or 11) large Stenocionops spinossisima 1 Peneus leucosids, Ranillia lot of living and dead urchins, Acanthocarpus, few Portunus spinicarpus.

#26 - 32

Begin 60 fms., over at 1:00 p.m., down (bottom) 1:30, 250 fms. cable. Start up 2:07, sound end 60 fms., on deck 2:30. About 2 or 3 more Stenocionops. Fish much as in previous haul, but with some additions. Earlier haul (#25) may have been pretty much all in 60 fms. but I doubt it; we came in from 125 fms. on a W X N course, or little that way.

Pyrosoma, Portunus spinicarpus, small starfish, very few sea urchins, large hermit.

July 1, 1932

#27 - 32.

Sound 2:50 = 43 fms., over 2:55, bottom 3:12, 150 fms. cable out.

Start up 3;32 p.m., on deck 3:45, Red buoy 5:00, at dock 5:30.

2 Stenocionops, 3 round sand dollar-like urchins and 2 anemones, put with #26-32, flock of hermits, shell bottom, and wire-like,whip alcyonarians.

Several Stenorhynchus (1 to Towe) shelly bottom, dollar urchins.

#25 - 32

Acanthocarpus alexandri (Stimpson).

40♂ 156♀ (2 ovig.) 1 juv. Most of the specimens were of medium and less/ size.

#26-32 Acanthocarpus alexandri (Stimpson)

21♂ 10♀ on the average somewhat larger than preceding lot.

Portunus spinicarpus (Stimpson)

36♂ 40♀ (1 ovig) (Stone 1♂ , Boyden 1♂ 1♀ , Manter 1♂
(Mills 2♂ , de Laubenfels 1♂

Stenocionops spinosissima (Saussure)

#28 - 32

Hot, hazy, sunny day. Lab forenoon, but chiefly spent getting cammera box ready.

Couple of hours on Bird Key Reef. Got mostly Mithrax verrucosus for Boyden, couple of Mithrax and 2 Petrolisthes

July 2, 1932 Hazy, sunny, quite quiet water.

#29 - 32.

Left dock	6:20	Pass Red #2 buoy at 6:55
Stop and sound	8:50	140 fms.
Net over	8:57	
	10:22	360 fms. cable out
~~Pass Red #2 buoy~~	~~6:55~~	
Ship anchored		
Take in net and sound	11:00 p.m.	79 fms.

#30-32. About 17 miles S. 156-135 fms.

Net over 11:40, cable at 12:40 = 460 fms. Start up 1:25, on deck 2:17, Sound 2:20 = 135 fms. Run N. at 3:05, sound 49 fms.

#31 - 32 = 49 fms.

~~xNetxoxexxx3:10,xx4:05xxtxrtxxpxx170xxfmsx?xxxabxexoxtxx4:20x~~

Net over 3:10. 4:05 Start up. (170 cable out) 4:20 on deck. Start back 5:25 pass Red #2 buoy.

#29 - 36 (21a) = 140-79 fms. Ran into ridge encountered in first haul of June 30, #25-32 = 125-65 fms. Got 2 flounders, ~~xxa~~ 1 large brotulid, globular sea urchins, 1 red scorpaenid, 5 Anasimus (1 to Stone).

#30 - 32 = 156-135 fms. About 17 miles S.
Red legged spiders with barnacles,
(2 Geryon, Benthocascon and Bathynectes in quantity, 38 ♀ to Boyden.

Of Bathynectes 5 or 6 ♀ to Stone 4 ovig., and 1 ♂ rest saved, ovig.

#31 - 32 = 49 fms.

P. spinicarpus 50 ♂ 50 ♀ (about 10 ovig.) all saved, 41 ♀ 29 ♂ discarded.

Lots of flounders and three cake urchins, large Stenocionops and 1 large ~~xx~~ box crab.

July 3, 1932.

Very hazy, murky day; though we had sunshine, it was sort of subdued. Warm day.

#32 - 32

At about 1:45 started for Bird Key Reef, went through a number of Porites clumps and got several fish, number of Hippolysmata for Manter, also C. formosus and number of Synalpheids. Is a wonderful way in which to get shrimp if one isn't too long looking over bottom of tub and drains off water through a sieve. 2 flounders, 1 Brotulid, globular sea urchin, 1 red scorpaenid.

July 4, 1932

Clearer and windier; few large cumulus clouds, with plenty of blue between.

#33 - 32.

Bird Key Reef through suppertime. Got few odds and ends after supper, two other trips about 5:45 - 7:15. Everything this day and preceding to Bird Key Reef from Porites clumps.

July 5, 1932

#34 - 32.

July 6, 1932

Went photo-ing between 11:00 and 12:00. Four shots.

July 7, 1932

#35-32

Left dock 8:00 a.m. 8:20 net over west side White Shoal, tow S.W. ± Start up 8:43, surface 8:45. 40 fms. cable. Poor fish haul (Black cup sponge.)

#36-32

Repeat of #35 - 32. ~~Specimens combined~~.

Over 9:00 a.m. 45 fms. cable
Bottom 9:07
Start up 9:35
On deck 9:40

Many fish and flounders, nothing particularly new. Young **Fierasifer** out of Holothurian from first haul, I suppose, was found in lower sieve of dredge table at time finished sorting first haul.

#35 & #36 specimens combined.

#37 - 32

Head of channel east White Shoal and black channel buoy.

Over at 10:00 a.m. from between red buoys, 45 fms. cable. **Start** up 10:15, surface 10:19. Fair fish haul.

#38 - 32

Lost net! in channel below channel buoy and black C 3 buoy. Over at 10:30, start up 10:40, on deck terribly twisted 11:07. Lines all in one snarl; lead line only brought

(followed by 17a

July 8, 1932

Three dips with mud bucket and 3 hauls with boat dreadge--last not counted. Wrecked net at end of haul on rough bottom.

#39 - 32. 12½ fms.

Stiff compact mud, many shells, dead and living, and shell fragments washed out of mud. Left anchorage at 8:30, used orange peel bucket 9:13 (12½ fms.) about 1/4 to half mile S.W. Red buoy east of Bush Key, steam 10 min.

#40-32

Bucket second time at 9:33, 13 fms.

#41 - 32

Close to black buoy to S.W., 14 fms., at 9:45.

#42 - 32

Steam back N.E. with boat dredge, 14 fms.?

43 -- 32

Hauled up weedy haul, little mud.

#44 - 32 cancelled, wrecked net.

Insert under stas., p. 17?

#39 - 32

Compact soft mud.

#40 - 32.

Compact soft mud. Crangon floridanus, 2 Synalpheus, 2 Callianassa

41 - 32

Quite a lot of black specks in mud and very sandy (coarse sandy mud). 2 Euryplax nitida, 1 Callianassa, several sipunculids.

#42 --32

1 Euryplax, 2 Processa canaliculata, 1 Crangon, Tanaid isopod.

#43 - 32

Amphipod, 1 Crangon floridanus, 1 tiny starfish

July 9, 1932, Saturday

Photo'd a.m. and p.m.

July 10, 1932, Sunday

Photo'd a.m & p.m. F8, slight haze, 4-6 ft. water. Before 6:30 took some outside.

July 11, 1932, Monday

Photo'ed p.m. (Before 6:30 took some outside.)

July 12, Tuesday

On razor fish ground and off east lighthouse dock in 2-3 feet water. Above camera, 5 feet water all told. F11 best, should be F16.

July 13, Wednesday

Boat returned. Photo'd Dohrn from lighthouse with telephoto between island and fort and approaching dock.

July 14, 1932, Thursday
#44 - 32.

In a.m. on stomach contents and in p.m. Dr. Longley had visitors while I went over to Bush Key with Stone. Could find no Platypodias on old ground. There seemed to be a lot of mud and muck there to an extent I don't recall. Clib. vittatus in shells on mud flats along beach.

July 15, 1932

#45 - 32

Bird Key reef with Manter and Dexter. Got mollusks and Lysmata intermedia. Collected along outside edge of Bird Key reef, south of mid channel that divides it in two. Dexter got me two Percnon, I believe first I've seen, and couple of large red Mithrax (not saved) under loose rocks on inner tide pool just inside front edge. M. verrucosus can always be gotten here in quantity. Galathinus are plentiful, as usual, but hard to catch. ~~Clib~~ Not many Clib. tricolor, but plenty Calcinus.

#46 - 32

Stone and Warren Lewis worked Bush Key Reef again, as Stone and I did day before. Stone again brought me a number of Clib. vittatus from along strand's edge. Lewis a large C. ornatus and a number of small Palaemon or Palaemonetes caught in tide pool along with a large Peneus. Gave half to Manter. Lewis also got me a couple of Crangon armillatus and an all-over greenish heterochaelis type. Stone got another lot of Clib. vittatus for me.

July 16, 1932 ~~xxContinuedx~~

#47 - 32 367-375 fms.

Leave dock at about 5:00 a.m. Pass upper buoy 5:15; pass lower No. 2 Red buoy 5:33. Run S. 2 hrs. 30 mins. to 8:00 a.m.

Sound	8:05	367 fms. Lead up 8:23
Net over	8:30	1125 fms. cable out
	10:07	vessel anchored
Net hauled up at surface	11:15 a.m.	
Sound	11:20	375 fms.
Up	11:45	

Lot of new species not before seen. Several good crinoids, starfish, ophiurans. Various crustacea, including peculiar larvae taken from "dolphin" stomach by Williams.

#48 - 32. Net lost, cable broke.

Stop 12:15. Sound 12:20 289 fms. Lead up 12:30. Stop and sound after 10 min. north at 12:45, 12:50 - 217 fms.

Net over	1:00 p.m.	
On bottom	1:45	660 fms. almost
Haul in	2:14	

Lost net at surface.

Sound 2:53 = 312 fms.

#49 - 32. 98 fms.

Run north 30 mins.

Sound 3:50, 149 fms. Sounding took 15 mins., lead deck 3:55.

Sound	4:15 p.m.	98 fms.
Net over and on bottom	4:35 p.m.	302 fms. cable out.
Start up	5:00	
Start home	5:15	
Home	9:30	

July 17, 1932. Bird Key Reef

#50 - 32

Collected under rocks and cracked a few. Got some (same?) things.

July 18, 1932

#51 - 32 430-392 fms.

Leave dock 4:45 a.m. Pass #2 Red buoy 5:20 a.m.. Stop and sound 8:20, 430 fms. (lead on bottom 8:30), lead on deck 8:43.

Net over 8:49 At 9:40 1270 fms. cable out
Vessel anchored and haul in 10:05
Haul in, 10:05 10:48 net at surface
Sound 11:37 = 392 fms.

#52 - 32 392-375 fms.

392 fms. at 11:37 as above. Net over 12:00 noon; 1:00 p.m. 1030 fms. out, pulled up to 1000 at 1:20 p.m. Start up 1:35, sound 2:36 p.m. = 375 fms. Rare fish, deep sea, including shark. Best haul of day.

#53 --32 46 fms.

Start home 3:00. Sound 4:25, 46 fms. Lead up 4:30.

Net over 4:35 , 150 fms. cable out, 160 fms. at end. Start up 4:55. Pass buoy at 6:30 p.m.

Dexter brought me some crabs from buoys, found among barnacles.

July 19, 1932. ~~3x5x~~

#54 - 32. 315-295 fms.

Leave dock 7:25 a.m. , pass No. 2 red buoy 7:52 a.m., run S. to 10:13.

Sound	10:13 a.m.	315 fms.; lead up 10:30
Net over	10:35	
Bottom	11:25, 900 fms.	cable out; 12:00 noon 20 fms. more, 12:05, 25 fms. more.
Start up	12:15	
On deck	1:05 p.m.	
Sound	1:10 p.m., 295 fms.	

Two large Bathynomus (one 13 inches long), several Geryon quinquedens, Bathyplax typhla, Munida_____, spider crabs.

#55 - 32. 168 fms.

Run back N x E, 25 mins. Sound 1:53 p.m., 119 fms.; run S. 10 minutes. Sound 2:13 p.m., 168 fms., about 18 miles south.

Net over	2:20	
Bottom	2:57	470 fms. cable out
Start up	3:26	
Surface	3:48	
Deck	3:50	and start home
Lighthouse	5:42	(about 48 mins. after start, fide Phil)
Pass #2 red buoy	6:15 p.m.	

7♂ 10♀ Bathynectes superba to Boyden.

July 20, 1932. Windy, cloudy.) Got dredged things cleaned up in laboratory.
) And on 20th photo'd things developed. ~~&ax~~
July 21, 1932. Ditto) ~~xnxafxerrnoonxofxpictnrexxriaixx~~

July 22, 1932. Still little windy and somewhat cloudy.

Got in afternoon of picture trials.

#56 - 32. Seems never to have been entered. Miss Rathbun had one dromid from this station: $12\frac{1}{2}$-14 fms., July 22, 1932.

July 23, 1932. ~~9~~xx

#57 - 32. 92-94 fms. About 14 miles S.

Leave anchorage 7:05, pass No. 2 Red Buoy at 7:40; [at] 9:02 lost sight of light. Stop and sound 9:15; at 9:18 a.m. = 82 fms. Run S. 5 mins., one engine. Stop and sound 9:27 = 92 fms., lead up at 9:31.

Net over	9:35	
Bottom	9:51	260 fms.
Start up	10:25	
At surface	10:40	
Sound	10:47	= 94 fms.

#58 - 32 94-83 fms. About 14 mi. S.

Tow back over previous course, B.F. shrimp trawl.

Net over	10:55	At 11:20, 270 fms. cable
Start up	12:10 p.m.	Sounding - 83 fms.

#59 - 32 83-91 fms. About 13 Mi. S. Special fine mesh net.

Net over	12:45	at 1:00 p.m., 260 fms. cable
		at 1:12 p.m., 270 fms. cable all told
Start up	1:45	
Up	2:00 p.m.	
Sound		91 fms.
Start home	2:10	
Pass No. 2 red buoy	3:46 p.m.	

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From #57-32

12 ♀ 2 ♂ Acanthocarpus discarded; rest in small bottle.

From #59-32:

Ranillias from this haul--"tumble bugs," name crew gave them. About 100 ♀ 20 ♂ discarded and half gallon jar saved. Acantho's from last haul in bucket? Illiacantha, Stenocionops, and Anas... from all three hauls; most of from second, also largest from second haul, but second and third largest from first haul. Urchins dead and few small living from #57-32. More living urchins (all small) from #58-32, crushed fragments from last #59-32.

July 24, 1932

Took a few trial shots in very shallow water on regular film. In afternoon located razor fish nesting ground.

July 25, 1932

Dohrn left in took few shots of razor fish nest.

July 28, 1932

Five hauls, of which first resulted in lost net, second and third combined, as apparently were what crustacea there were taken in fourth and fifth of successful, fishes except for ~~fixxxxx~~ first two successful hauls combined.

#60 - 32 Lost net

Leave dock 6:45, pass red No. 2 buoy 7:15. Stop and sound (1 hr. 20 min.) 8:35 a.m., ≃51 fms. Cable out 160 fms., haul in 9:43, net gone. Sound 9:53 a.m., 57 fms., tow back.

#61 - 32 57-46 fms. Tow back

Net over	10:17	150 fms. cable
Start up	10:30	
Surface	10:37	Sound 10:45 ≃46 fms.

11 ♀ (1 ovig.) 3 ♂ P. spinicarpus all told
1 smaller than medium Stenocionops ♂

#62 -- 32 46-50 fms. (for 61 & 62 together, 57-46 fms.

Sound	10:45	46 fms.	
Net over	10:50		
Bottom	11:02		150 fms. cable
Start up	11:30		
Sound	11:30	50 fms.	

6 ♀ (2 ovig.) 1 ♂ P. spinicarpus

From #57 - 32:

12 2 Acanthocarpus discarded; rest in small bottle.

From #59-32:

Ranillias from this haul--"tumble bugs," name crew gave them. About 100 20 discarded and half gallon jar saved. Acantho's from last haul in bucket? Illiacantha, Stenocionops, and Anas.... from all three hauls; most of from second, also largest from second haul,but second and third largest from first haul. Urchins dead and few small living from #57-32. More living urchins from #58-32, crushed fragments from last #59-32.

July 28, 1932 - Continued

#63 - 32. 50-58 fms. Tow back

Net over	11:40	
Bottom	12:00	noon
Start up	12:37	
Deck	12:47	
Sound	12:50	58 fms.

#64 - 32 58-55 fms. Tow back

Sound 12:50 58 fms. Net bottom 1:07 = 160 fms. cable out. Start up 1:30, surface 1:47, deck 1:50. Sound 1:53 = 55 fms. and start home.

Have dozen P. spinicarpus, couple of Acanthocarpus bispinosus, 3 or 4 discarded.

July 30, 1932

#65 - 32

Start 4:40, pass red buoy 5:20, sound 8:48 to 9:15, 501 fms.; sound 9:30 to 9:55, 462 fms. Run S. from 9:55 to 10:21; sound from 10:21 to 10:35, 580 fms.; lead on bottom 10:35.

590-600 fms. 11:01 1290 fms. cable out.

Anchored ship to start up. 1:47 at surface.

Sound lead up 2:45 p.m. (?547 fms.). Home about 9:00 p.m.

#67 --1932 140-197 fms.

Buoy 51.

Sound from 8:48)
to 9:15) 501 fms.

Run S.

Sound from 9:30)
to 9:55) 462 fms.

Sound from 10:21)
to 10:35) 580 fms.

#68 - 32 197 fms.

Net at surface 1:47
Sound about 1:50
Lead up 2:49

1352 meters = ?547 fms.?

depth ?

? to wire

Aug. 3, 1932

#66 Aug. 1 - Manter

67 Aug. 1, 197 fms. about 16 mi. S.
140-197 fms., 16 mi. S.

#68 Aug. 3. 73?

#69-32

Red buoy	5:35
Sound	7:45 =334 fms.
Run back	
Sound	249 fms.
	9:25 = 700 fms. cable out
	9:50 = 770 fms. cable out.

#70 -- 32

Sound wire at great angle = 358 or 250 fms.? because dredge anchored with it only 250 fms. cable out.

Aug. 3, 1932 Pictured clouds all afternoon.

Aug. 4, 1932 Fine in a.m., water very turbid in p.m.

Aug. 5, 1932 Manter dredged

#71 - 32 190-280 fms.

Run 2 hrs. S. Red #2 Buoy
Sound, 299 fms.
Run N. 12 mins.
Sound 190 fms.
Net hauled about 45 mins.
Sound 280 fms.

#72 - 32 130-112 fms.

Sound 130 fms.)
Hauled 40 mins.) Mostly mud
Sound 112 fms.)

#73 - 32 66-60 fms. 12 mi. S.

Sound 66 fms.
Hauled 30 mins.
Sound 60 fms.

#74 - 32

Sound 60 fms.
Hauled 30 mins.
Sound 60/fms. end. ~~end~~

Does Razor fish occupy 2 nests. Abudefduf changes color. Illyoglossus very shy and very sudden entering and leaving burrow.

Aug. 5. Gnathypops rebuilt nest, quite a crater formed first.

Dredging data

Depth Begin	Depth End	Cable out	Catch	Sta.
39	39	150-160	Large rocks, flounder & few fish	#22-32
40	45	127	Fairly good	3-32
45	46	150-170	" "	4-32
60	72	209	Samddollars and numerous Crustacea. Acanthocarpus	33-31
72	60	288-315	Few fish, 1/3 pail	21-32
120	120	350	Fair traces mud, few fish and crabs	36-30
153	158	340	Good	32-31
180	220	695	"	37-30
205	221	600-700	"	18-31
200	253	600	"	21-31
205	283	833	"	20-31
253	283	800-900	"	22-31
290		908	"	19-31
		Empty hauls		
40		85-100		2-32
64	72	203		20-32
80	150	240		13-30

100 meters = 55 fms.	1 hr. 15 min. = 49 fms.	2 hr. 20 min. = 283
200 109	1 30 60 "	2 20 290
300 164	1 34 72 "	
400 219	1 40 80 "	
500 273	1 45 120 "	
600 328	1 45 125-65	
700 383	1 55 140-79	
800 437	1 40 153	
900 492		
1000 547	2 hr. 205	

Tortugas

P. 291

Data for working out stations on chart

Running times

1 hr		49 fms.
1 hr.	15 min.	43 "
1	30	60 "
1	34	72 "
1	34	92 "
1	45	80 "
1	45	120 "
1	45	122-65
1	53	140-79
2 hr.		205 fms.
2 hr.	20 min.	283 "
2	20	290 "
2	30	367 "
3		430 "